IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF ILLINOIS
EASTERN DIVISION

BALLY MANUFACTURING CORPORATION, Plaintiff,	)	78 C 2246
v.	)	CIVIL ACTION NO. 78 C 2246
D. GOTTLIEB & CO., WILLIAMS ELECTRONICS, INC., AND ROCKWELL INTERNATIONAL CORPORATION, Defendants.	)	Judge John F. Grady

NOTICE OF FILING

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PLEASE TAKE NOTICE that on Monday, March 5, 1984, we filed with the Clerk of the United States District Court for the Northern District of Illinois, Eastern Division, plaintiff's Statement to the Court, a copy of which is attached hereto.

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STATEMENT TO THE COURT

During the current trial recess, counsel for Bally discovered that some evidence presented at trial is incorrect. We are filing this statement in accordance with our duty to bring this matter to the Court's attention at the earliest opportunity.

Certain developments during the trial caused us to begin reexamining some of the evidence already introduced. Subsequently, on February 9, 1984, we received a letter from Mr. John F. Lynch, counsel for defendants D. Gottlieb & Co. and Rockwell International Corporation, which charged, in general terms, that fraudulent evidence had been presented to the Court and to the Patent and Trademark Office, and which asked us to conduct an investigation. Although Mr. Lynch did not then provide any particulars as to the bases of these charges, we took them seriously and conducted an investigation to the best of our ability.

We have discovered nothing which would lead us to conclude that there is substance to the charges contained in Mr. Lynch's letter. However, our investigation has revealed that there are differences as to three matters between certain evidence offered as part of our case and the facts as we now know them.

I. The Instructions of the Computer Program Which Operates the Electronic Flicker Game (PX 333) Differ in a Number of Respects, Which Plaintiff's Evidence Will Show Are Not Material, from the Computer Program Listing Introduced as PX 436.

As part of our investigation, with the assistance of our expert, Dr. Schoeffler, we compared the program listing obtained during the trial by electronic means directly from the EPROMs of PX 333 with the program listing printed in PX 436. Dr. Schoeffler noted certain differences which he has described to us as immaterial. Had these differences been known to us or recalled by Mr. Frederiksen at the time of his testimony, they would have been included as part of the foundation for the admission into evidence of PX 436.

An identification and a considerably detailed analysis of these differences is as follows:

1. Two instructions in the PX 436 program listing's "MAIN" routine were replaced by two others in the program dumped from Flicker's EPROM. The original instruction would have required the processor, when it sensed a switch closure, to jump to a location beyond the number of instructions for which the original instructions were valid. The new instructions allow the same jump to be made within a valid number

of instructions. This change was required as a result of a common problem encountered in programming complex routines. Until this obvious change was made, the game could not be played. Once this malfunction had been encountered, its detection and solution would have been obvious to an electronics engineer with ordinary skills in computer programming at the relevant time.

2. The INTER routine in the EPROM dump program is different from that shown in PX 436. Schematic PX 28 shows 6 circuits labelled 14050 which normally would be implemented with a single 14050 chip. In Flicker, the 14050 circuits have been implemented with 14049 circuits which are contained in chips labelled 14049. Both 14049 and 14050 circuits are buffers, but chip 14050 enables the microprocessor to detect a switch closure on the test line switches when the microprocessor receives a zero or low voltage, while chip 14049 enables the microprocessor to read a switch closure if it receives a high voltage. The two chips are completely interchangeable for this purpose except that chip 14050 requires a computer instruction of "Jump if the test line is low," while chip 14049 requires an instruction of "Jump if the test line is high." The PX 436 program listing contains an instruction appropriate for the chip 14050. The EPROM dump shows an instruction appropriate for the chip 14049 which is actually on Flicker's circuit board.

3. The majority of the changes in other routines were due to a change made in the commonly used routine

called "BIT." BIT's instructions originally called for the use of registers 4 and 5, but in the course of debugging were changed to registers 2 and 3. These changes also affected the use of registers 4, 5 and 9 in other routines. These register changes commonly occur when portions of a program are tested separately from each other. When the program is assembled as a whole a conflict between two routines for the same register becomes apparent. The removal of these conflicts is a common part of debugging a program. These register changes do not affect the structure and functions of the routines themselves.

4. The other changes to the instructions as they appear in PX 436 are corrections of simple errors, most often in the use of the bit testing routine for memory variables, e.g., whether a lamp is on or off or whether a switch is open or closed. In the initial programming of this test procedure, the wrong number bit may have been used. These are typical mistakes in original programming which, as part of the debugging process, are routinely detected and corrected by checking the accuracy of the bit assignments.

5. Flicker's EPROM program listing contains seven brief sections of instructions which were added on the end of the PX 436 program listing. These sections apparently corresponded to errors that required additional instructions to correct. For example, one of the sections clears the settings of certain special switches so that a new game could begin. Clearing these switches apparently had been

overlooked in the PX 436 program listing. None of these additions causes any functional or structural change in the PX 436 program listing.

6. The PX 436 program listing does not show the jump look-up table and certain other short series of instructions contained in the EPROM dump program. Without a look-up table, the Flicker game could not be played.

II. Some of the Components of the Electronic Flicker Game (PX 333) Are Equivalent Substitutes for Components Which Were Actually in the Game on September 26, 1974, the Date of the Demonstration to Bally Representatives.

By making a close inspection of the code numbers on the electronic components of the Flicker game, and by consulting with manufacturers concerning the meaning of these codes, we have learned that at least five components were apparently manufactured after September 26, 1974, and thus could not have been operational in the game on that date. These components were replacements for identical components manufactured before September 26, 1974, differing only in their date of manufacture. If Mr. Frederiksen had been aware at the time he testified that these replacements had been made, he would have so testified.

The identity of the replacement components is as follows:

1. A Motorola integrated circuit coded "MC 14514 CL 7444" was apparently manufactured in the 44th week of 1974. This component is one of the two "1-of-16" decoders on the board, one of which is used for the columns of the matrix and the other for the solenoids.

2. Two Motorola integrated circuits are coded "MC 14049 CP 7444" and were apparently manufactured in the 44th week of 1974. These integrated circuits are hex inverting buffers, one of which is used on the test line. The buffer used on the test line was referred to in item #2 of the discussion of computer programming changes.

3. Two EPROMs were apparently manufactured by Intel in the week of October 6, 1974. The manufacture date of Flicker's other Intel parts is not currently known, but we are continuing our investigation to obtain that information.

III. Some of the Components of the Electronic Flicker Game (PX 333) Differ in Certain Respects Which, In the Opinion of Plaintiff's Expert, Are Immaterial from Those Depicted on the Schematic Drawings Introduced as PX's 28, 49, 50, 51, 52, and 53.

We are currently aware of the following specific differences:

1. PX 28 shows six buffers, each labelled 14050, which probably would have been implemented with a single 14050 chip. As discussed above, these 14050 buffers have been replaced in the Flicker machine with 14049 inverting buffers contained on chips labelled 14049. These two chips serve essentially the same purpose and function. The 14050 buffer shown on the test line in PX 28 was referred to in item #2 of the discussion of computer programming changes.

2. PX 28 shows two integrated circuits with part number 14502 which are shown to be connected to two sets of four rows of switches. Flicker, as it was actually implemented, never used the second set of switches; therefore, the second

14502 chip was never needed. As for the switch rows which were implemented, the 14502 chip on the schematic was replaced by a chip numbered 14016. Both chips 14502 and 14016 are equivalent transmission gates.

3. PX 28 shows two integrated circuits labelled 14543. Chip 14543 is a special latch and decoder used for a 7-segment drive. PX 28 shows one chip 14543 being used as a latch for the 7-segment drive and a second chip 14543 as a latch for the lamp drive. Only one of the two chips labelled 14543 is used on Flicker's circuit board. The number 14543's appearance on PX 28 as a latch for the lamp drive is a drafting mistake. Flicker's circuit board contains an extra chip 14042 which is not shown but should have been shown on PX 28. Chip 14042 is a standard latch which is more logical and less expensive to use on the lamp drive than the special 7-segment decoder/latch, chip 14543. In fact, the pin assignment of the 14543 chip shown on PX 28 is that of a 14042 chip. This manifests a drafting error.

4. A large power resistor on the machine's driver board, used in Flicker's power supply, is not shown on any Flicker schematic. This resistor was conventionally used in regulated power supplies, such as that used in the Flicker.

5. Under the playfield, the flipper solenoids have a circuit which causes the solenoids to activate quickly and forcefully. This extra circuitry is not shown on any Flicker schematic.

6. PX 28 shows a 1K resistor on the test input, but Flicker may use a resistor with a different value. The change in resistor level, if any, has no effect on Flicker's operation.

7. The mux chart in PX 53 shows all the switches which could be implemented in the Flicker machine. Although all the switches in PX 53 are part of Flicker's hardware, because Flicker was built as a prototype machine some special feature switches, which are non-critical to the game's operation, were not implemented in Flicker's software.

If we had known of these differences reference would have been made to them as part of the foundation for admission of these documents into evidence.

CONCLUSION

Formal evidence and testimony on the points discussed above will be tendered at the earliest possible time upon resumption of the trial.

Respectfully submitted,

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Date: March 5, 1984